

Pt. 135, App. E

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Parameters	Range	Accuracy sensor input to DFDR readout	Sampling interval (per second)	resolution ⁴ read out
Nav 1 and 2 Frequency Selection.	Full range	As installed	0.25.	

¹ When altitude rate is recorded. Altitude rate must have sufficient resolution and sampling to permit the derivation of altitude to 5 feet.

² Per cent of full range.

³ For airplanes that can demonstrate the capability of deriving either the control input on control movement (one from the other) for all modes of operation and flight regimes, the “or” applies. For airplanes with non-mechanical control systems (fly-by-wire) the “and” applies. In airplanes with split surfaces, suitable combination of inputs is acceptable in lieu of recording each surface separately.

⁴ This column applies to aircraft manufactured after October 11, 1991.

[Doc. No. 25530, 53 FR 26153, July 11, 1988; 53 FR 30906, Aug. 16, 1988]

APPENDIX E TO PART 135—HELICOPTER FLIGHT RECORDER SPECIFICATIONS

Parameters	Range	Accuracy sensor input to DFDR readout	Sampling interval (per second)	Resolution ² read out
Time (GMT)	24 Hrs	±0.125% Per Hour	0.25 (1 per 4 seconds).	1 sec
Altitude	– 1,000 ft to max certified altitude of aircraft.	±100 to ±700 ft (See Table 1, TSO-C51a).	1	5' to 30'.
Airspeed	As the installed measuring system.	±3%	1	1 kt
Heading	360°	±2°	1	0.5°.
Normal Acceleration (Vertical)	– 3g to +6g	±1% of max range excluding datum error of ±5%.	8	0.01g
Pitch Attitude	±75°	±2°	2	0.5°
Roll Attitude	±180°	±2°	2	0.5°.
Radio Transmitter Keying	On-Off (Discrete) .....	.....	1	0.25 sec
Power in Each Engine: Free Power Turbine Speed and Engine Torque.	0–130% (power Turbine Speed) Full range (Torque).	±2%	1 speed 1 torque (per engine).	0.2% ¹ to 0.4% ¹
Main Rotor Speed	0–130%	±2%	2	0.3% ¹
Altitude Rate	±6,000 ft/min	As installed	2	0.2% ¹
Pilot Input—Primary Controls (Collective, Longitudinal Cyclic, Lateral Cyclic, Pedal) ³ .	Full range	±3%	2	0.5% ¹
Flight Control Hydraulic Pressure Low.	Discrete, each circuit .....	.....	1	
Flight Control Hydraulic Pressure Selector Switch Position, 1st and 2nd stage.	Discrete .....	.....	1	
AFCS Mode and Engagement Status.	Discrete (5 bits necessary).	.....	1	
Stability Augmentation System Engage.	Discrete .....	.....	1	
SAS Fault Status	Discrete .....	.....	0.25	
Main Gearbox Temperature Low.	As installed	As installed	0.25	0.5% ¹
Main Gearbox Temperature High.	As installed	As installed	0.5	0.5% ¹
Controllable Stabilator Position.	Full Range	±3%	2	0.4% ¹ .
Longitudinal Acceleration	±1g	±1.5% max range excluding datum error of ±5%.	4	0.01g.
Lateral Acceleration	±1g	±1.5% max range excluding datum of ±5%.	4	0.01g.
Master Warning	Discrete .....	.....	1	
Nav 1 and 2 Frequency Selection.	Full range	As installed	0.25	
Outside Air Temperature	– 50 °C to +90 °C	±2° c	0.5	0.3° c

¹ Per cent of full range.

² This column applies to aircraft manufactured after October 11, 1991.

³ For all aircraft manufactured on or after December 6, 2010, the sampling interval per second is 4.

[Doc. No. 25530, 53 FR 26154, July 11, 1988; 53 FR 30906, Aug. 16, 1988; Amdt. 135–113, 73 FR 12571, Mar. 7, 2008; 73 FR 15281, Mar. 21, 2008; Amdt. 135–121, 75 FR 17047, Apr. 5, 2010]